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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet

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of

6

**Complete If Known**

Application Number	10/814,123
Filing Date	April 1, 2004
First Named Inventor	Zheng Zhang
Art Unit	1712
Examiner Name	Kuo-Liang Peng

Attorney Docket Number 3244-126 (formerly 571-932)

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
KL		US- 5,624,875	04-29-1997	Nakanishi et al.	
		US- 6,531,060	03-11-2003	Nakanishi et al.	
		US- 2001/0041459	11-15-2001	Smith et al.	
		US- 6,303,290	10-16-2001	Liu et al.	
		US- 6,080,402	06-27-2000	Reetz et al.	
		US- 6,090,448	07-18-2000	Wallace et al.	
		US- 4,588,824	05-13-1986	Nygren et al.	
		US- 4,673,584	06-16-1987	Nygren et al.	
		US- 5,074,916	12-24-1991	Hench et al.	
		US- 5,300,564	04-05-1994	Avnir et al.	
		US- 6,048,546	04-11-2000	Sasaki et al.	
		US- 6,210,570	04-03-2001	Holloway	
		US- 6,171,986	01-09-2001	Zhong et al.	
		US- 5,071,874	12-10-1991	Nogues et al.	
		US- 5,243,769	09-14-1993	Wang et al.	
		US- 5,100,841	03-31-1992	Wada et al.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
KL		EP 0363897	04-18-1990	Asahi Glass Company Ltd.		
		WO 01/58562	08-16-2001	University of South Florida		
		WO 98/29350	07-09-1998	Merck Patent GmbH		
		WO 01/01139	01-04-2001	McMaster University		
		CH327722 Chem. Abst. No. 53:40001	03-31-1958	Lonza Elektrizitätswerke und Chemische Fabriken Akt.		

Examiner Signature

*Kuo-Liang Peng*

Date Considered

10/14/05

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Substitute for form 1449A/PTO		<b>Complete If Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		<i>Application Number</i>	10/814,123
		<i>Filing Date</i>	April 1, 2004
		<i>First Named Inventor</i>	Zheng Zhang
		<i>Art Unit</i>	1712
		<i>Examiner Name</i>	Kuo-Liang Peng
Sheet	2	of	6
		<i>Attorney Docket Number</i>	
		3244-126 (formerly 571-932)	

## **U.S. PATENT DOCUMENTS**

## FOREIGN PATENT DOCUMENTS

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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

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<i>Art Unit</i>	1712
<i>Examiner Name</i>	Kuo-Liang Peng

Attorney Docket Number 3244-126 (formerly 571-932)

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
(KLP)	1.	CABRERA, K. et al., "SilicaROD™ - A new challenge in fast high-performance liquid chromatography separations", Trends in Analytical Chemistry, 1998, pp. 50-53, Vol. 17, No.1.	
	2.	TANAKA, N. et al., "Monolithic Silica Columns for HPLC, Micro-HPLC, and CEC", J. High Resol. Chromatogr., 2000, pp. 111-116, Vol. 23, No. 1.	
	3.	ISHIZUKA, N. et al., "Preparation and Chromatographic Application of Macroporous Silicate in a Capillary", Journal of Sol-Gel Science and Technology, 2000, pp. 371-375, Vol. 19.	
	4.	MOTOKAWA, M. et al., "Monolithic silica columns with various skeleton sizes and through-pore sizes for capillary liquid chromatography", Journal of Chromatography A, 2002, pp. 53-63, Vol. 981.	
	5.	ISHIZUKA, N. et al., "Chromatographic characterization of macroporous monolithic silica prepared via sol-gel process", Colloids and Surfaces – A: Physicochemical and Engineering Aspects, 187-188, 2001, pp. 273-279.	
	6.	KANG, J. et al., "A silica monolithic column prepared by the sol-gel process for enantiomeric separation by capillary electrochromatography", Electrophoresis, 2002, pp. 1118-1120, Vol. 23.	
	7.	KIKUTA, K. et al., "Synthesis of Transparent Magadiite-Silica Hybrid Monoliths", Chem. Mater., 2002, pp. 3123-3127, Vol. 14.	
	8.	LEINWEBER, F. C. et al., "Characterization of Silica-Based Monoliths with Bimodal Pore Size Distribution", Anal. Chem., 2002, pp. 2470-2477, Vol. 74.	
	9.	NAKANISHI, K. et al., "Macropore Morphology Control of Silica Gel by Spinodal Decomposition", Chemical Processing of Advanced Materials, 1992, pp. 29-41	
	10.	NAKANISHI, K. et al., "Macropore Structure Design of Sol-Gel Derived Silica by Spinodal Decomposition", Porous Materials, 1993, pp. 51-60.	
	11.	GILL, I. et al., "Encapsulation of Biologicals within Silicate, Siloxane, and Hybrid Sol-Gel Polymers: An Efficient and Generic Approach", J. Am. Chem. Soc., 1998, pp. 8587-8598, Vol. 120.	
	12.	GILL, I., "Bio-doped Nanocomposite Polymers: Sol-Gel Bioencapsulates", Chem. Mater., 2001, pp. 3404-3421, Vol. 13.	
	13.	NAKANISHI, K. et al., "Synthesis of silica gel by polymer-mixed sol-gel method", Chem. Abstracts, AN. 118:259529, Shinsozai (1992), pp. 44-49, Vol. 3, No. 11.	
✓	14.	TANAKA, N. et al., "Octadecylsilylated porous silica rod for reversed-phase liquid chromatography", Chem. Abstracts, AN. 121:92758, Kuromatogurafu (1993), pp. 50-51, Vol. 14, No. 5.	

Examiner Signature

*Kuo-Liang Peng*

Date Considered

10/14/05

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Substitute for form 1449B/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		<i>Application Number</i>	10/814,123
<i>(Use as many sheets as necessary)</i>		<i>Filing Date</i>	April 1, 2004
		<i>First Named Inventor</i>	Zheng Zhang
		<i>Art Unit</i>	1712
		<i>Examiner Name</i>	Kuo-Liang Peng
Sheet	4	of	6
		<i>Attorney Docket Number</i>	3244-126 (formerly 571-932)

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
(KLP)	15.	FRYE, C.L., "Stable Silicon Heterocyclic Derivatives of Branched Alkanediols", The Journal of Organic Chemistry, 1969, pp. 2496-2499, Vol. 34, No. 9.		
	16.	VORONKOV M.G. et al., Chem. Abst. No. 69:58787, "Spirocyclic orthosilicic acid esters", Z. Chem., 1968, pp. 252-253, Vol. 8, No. 7		
	17.	GAINSFORD, G.J. et al., "Sodium Bis[1,2-ethanediolato(2-)](hydroxy-ethoxo)silicate(1-) Acetonitrile Solvate, Na[Si(C <sub>2</sub> H <sub>4</sub> O <sub>2</sub> ) <sub>2</sub> (C <sub>2</sub> H <sub>5</sub> O <sub>2</sub> )].0.25C <sub>2</sub> H <sub>5</sub> N", Acta Cryst., 1995, pp. 8-10, C51.		
	18.	MÜLLER, R. et al., Chem. Abst. No. 55:143332, "Silicones. LI. The identification and separation of alkoxy and aryloxy compounds with pentacovalent silicon", Chem. Berichte, 1981, pp. 1943-1951, Vol. 94.		
	19.	KEMMERM, T. et al., "The Ring Size Influence on <sup>29</sup> Si N.M.R. Chemical Shifts of Some Spirocyclic Tetra- and Penta -coordinate Diolato Silicates", Aust. J. Chem., 1995, pp. 93-102, Vol. 48.		
	20.	ARSENE, C. et al., "Cyclic Chiral Silyl Derivatives for the Determination of the Absolute Configuration of Aliphatic Diols by Gas Chromatography", Org. Lett., 2002, pp. 2869-2871, Vol. 4, No.17.		
	21.	SPINDLER, R. et al., "Investigations of a Siloxane-Based Polymer Electrolyte Employing <sup>13</sup> C, <sup>29</sup> Si, <sup>7</sup> Li, and <sup>23</sup> Na Solid-State NMR Spectroscopy", J. Am. Chem. Soc., 1988, pp. 3038-3043, Vol. 110.		
	22.	SATTLER, K. et al., Chem. Abst. No. 134:195237, "A new glycol precursor for template synthesis and its interaction with a surfactant", Chemie Ingenieur Technik, 2000, pp. 487-491, Vol. 72, No. 5.		
	23.	CHENG, H. et al., "Neutral Alkoxysilanes from Silica", J. Am. Chem. Soc., 2000, pp. 10063-10072, Vol. 122.		
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<i>KLP</i>	26.	KINRADE, S.D. et al., "Aqueous hypervalent silicon complexes with aliphatic sugar acids", J. Chem. Soc., Dalton Trans., 2001, pp. 961-963.	
	27.	SPINDLER, R. et al., "Synthesis, NMR Characterization, and Electrical Properties of Siloxane-Based Polymer Electrolytes", Macromolecules, 1998, pp. 648-654, Vol. 21.	
	28.	SCHOMBURG, D., "Strong Distortion of the Tetrahedral Geometry in a Spinosilicate: Molecular Structure of Bis(tetramethylethylenedioxy)silane", Angew. Chem. Intl. Ed., 1983, p. 65, Vol. 22, No. 1.	
	29.	MOORE, J.C., "Gel Permeation Chromatography. I. A New Method for Molecular Weight Distribution of High Polymers", Journal of Polymer Science Part A, 1964, pp. 835-843, Vol. 2.	
	30.	MEHROTRA, R.C. et al., "Reactions of Tetramethoxy- & Triethoxysilanes with Glycols", Indian J. Chem., 1967, pp. 444-448, Vol. 5.	
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	35.	KOPYLOV, V.M. et al., "Transesterification of tetraethoxysilane with difunctional alcohols in the presence of nucleophilic catalysts", Chem. Abst. No. 108:86867.	
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<i>V</i>	38.	ZHANG, Z. et al., "The Biporous Structure of Monolithic Silica Columns Containing Entrapped Proteins", Abstract, Submitted August 2002 Conference, published August 10, 2002.	

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